

CHANGYUAN ELECTRONICS GROUP CO., Ltd.
Shanghai Changyuan Electronic Material Co.,Ltd.

CERTIFICATION

Customer Name:		Products Name: Heat-shrinkable Tube		
Products Range: series		Standard : BLACK		
Withstand voltage level: 600V		UL NO. : E180908		
Products Type: CB-HFT		Rev. : A/2		
Customer Part Number: BP 300、 BP 400				
Customer signature	Approve	Re-Check	Check	Charge
	Date	Date	Date	Date

P.C.:518057

Add: Bld#30-4,Shenzhen Science & Technology Industry Park, Nanshan, Shenzhen, China

Tel: 0755-6553696(16Lines) Fax: 0755-6630674 0755-6632551

P.C.: 201802

Add: No.366, Xianghuang Road, Nanxiang Town, Jiading, Shanghai, China

Tel: 021-69978846, 69978839 Fax: 021-69978838

— . Specifications

Item		Reference	Specifications
Entirely shrink temperature (°C)		UL224	≥125
Shrink time (min)		UL224	5min
Temperature Range (°C)		UL224	-40-125
Longitudinal Shrinking Ratio (%)		UL224	≤±5
Tensile Strength (MPa)		UL224	≥10.4
Elongation Ratio (%)		UL224	≥200
Aging in circulating-air oven		UL224	(158±1.0) °C,7days
After aging	Tensile Strength (MPa)	UL224	≥7.3
	Elongation Ratio (%)	UL224	≥100
Dielectric Voltage Withstand (V)		UL224	600
Volume Resistivity (Ω·cm)		UL224	≥10 ¹²
Dielectric Strength (kV/mm)		UL224	≥15
Corrosion of Bare Copper		UL224	No corrosion
Heat Shock		UL224	No cracking
Cold Bend		UL224	No cracking
Flammability		UL224	VW—1
Concentricity (%)		UL224	≥65

— . Controlled hazardous substances

Item	Test Standard	Test Result
Cd	IEC 62321/2 111/95/CDV	<5ppm
Pb	IEC 62321 111/95/CDV	<50ppm
Hg	IEC 62321 111/95/CDV	<2ppm
Cr	IEC 62321 111/95/CDV	<5ppm
PBBs	IEC 62321 111/95/CDV	N.D
PBBEs	IEC 62321 111/95/CDV	N.D
Cl	IEC61189-2 : 2006	< 500ppm

Br	IEC61189-2 : 2006	< 500ppm
Br+Cl	IEC61189-2 : 2006	< 1000ppm

三. CB-HFT Heat-shrinkable Tube Standard Sizes.

3X

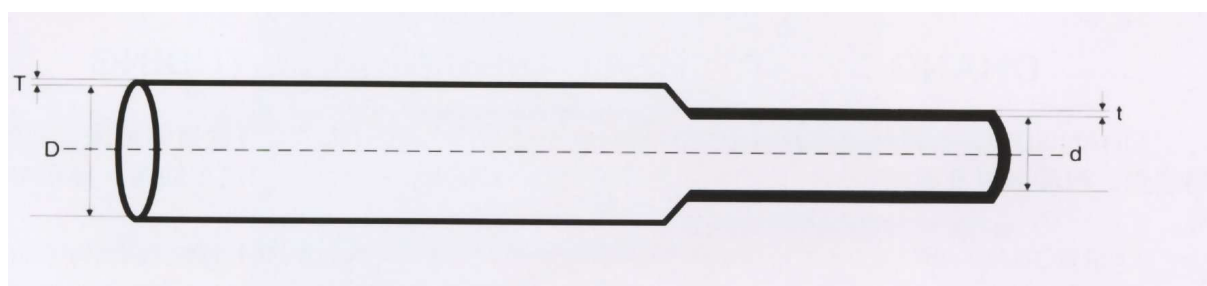
Size	As Supplied		After Recovery	
	Inside Diameter(D)	Wall-thickness(T)	Inside Diameter(d)	Wall-thickness(t)
Φ1.5	≥1.50	0.18±0.04	≤0.60	0.40±0.10
Φ3.0	≥3.00	0.20±0.05	≤1.00	0.55±0.10
Φ4.5	≥4.50	0.20±0.05	≤1.50	0.55±0.10
Φ4.8	≥4.80	0.20±0.05	≤1.60	0.55±0.10
Φ5.0	≥5.00	0.21±0.05	≤1.70	0.60±0.15
Φ6.0	≥6.00	0.22±0.05	≤2.00	0.60±0.15
Φ7.5	≥7.50	0.25±0.05	≤2.50	0.65±0.15
Φ9.0	≥9.00	0.25±0.06	≤3.00	0.70±0.15
Φ10	≥10.00	0.25±0.06	≤3.30	0.70±0.15
Φ12	≥12.00	0.25±0.06	≤4.00	0.70±0.15
Φ13	≥13.00	0.25±0.06	≤4.30	0.70±0.15
Φ15	≥15.00	0.25±0.06	≤5.00	0.70±0.15
Φ16	≥16.00	0.25±0.06	≤5.30	0.70±0.15
Φ18	≥18.00	0.30±0.07	≤6.00	0.80±0.20
Φ19	≥19.00	0.30±0.07	≤6.30	0.80±0.20
Φ20	≥20.00	0.30±0.07	≤6.70	0.80±0.20
Φ24	≥24.00	0.36±0.09	≤8.00	1.00±0.20
Φ25	≥25.00	0.36±0.09	≤8.30	1.00±0.20
Φ28	≥28.00	0.36±0.09	≤9.30	1.00±0.20
Φ30	≥30.00	0.36±0.09	≤10.00	1.00±0.20
Φ33	≥33.00	0.36±0.09	≤11.00	1.00±0.20
Φ38	≥38.00	0.42±0.10	≤12.70	1.20±0.20
Φ39	≥39.00	0.42±0.10	≤13.00	1.20±0.20
Φ50	≥50.00	0.42±0.10	≤17.00	1.30±0.20

4X

Size	As Supplied		After Recovery	
	Inside Diameter(D)	Wall-thickness(T)	Inside Diameter(d)	Wall-thickness(t)
Φ6.0	6.00±0.50	0.30±0.06	≤1.50	0.90±0.10
Φ8.0	8.00±0.50	0.30±0.06	≤2.00	0.90±0.10

Φ10	10.00+0.50	0.30±0.06	≤2.50	0.90±0.10
Φ12	12.00+0.50	0.30±0.06	≤3.00	1.00±0.10
Φ16	16.00+0.50	0.30±0.06	≤4.00	1.00±0.10
Φ18	18.00+0.50	0.30±0.06	≤4.50	1.00±0.10
Φ20	20.00+0.50	0.30±0.06	≤5.00	1.00±0.10
Φ24	24.00+0.50	0.35±0.07	≤6.00	1.20±0.10
Φ28	28.00+0.50	0.35±0.07	≤7.00	1.20±0.10
Φ32	32.00+0.50	0.40±0.08	≤8.00	1.40±0.10

四. HFT Heat-shrinkable Tube Drawing



Remark:If you want to print

1. Printing Contents of CB-HFT type tube :

Printing Contents of 600V :  **CB-HFT TUBE E180908**  **& c**  **125℃**
600V VW-1 -F- (ΦSizeH)

Unit : mm	Date : 2014/4/16	Name : CB-HFT Heat-shrinkable Tube	No. : CY/CD-HFT
Shanghai Changyuan Electronic Material Co.,Ltd.		Drawed by: 庞赛珍	checked by : 达飞腾
		Approved by: 卞文剑	

CERTIFICATE

Our company halogen-free environment-friendly CB - HFT Tube is a kind of flame retardant heat shrinkable tubing, This tube does not contain of Pb, Cd, Hg, Cr+6 , PBB and PBDE, it meets RoHS requirement. The component are as follows.

ENGLISH	MOLECULAR FORMULA	FUNCTION	MAREIAL MASS(%)	CAS No.
EVA	$(\text{CH}_2\text{-CH}_2)\text{m}\text{-(CH}_2\text{-CH-COOCH}_3\text{)}\text{n}$	MAIN RESIN	50%	24937-78-8
ATH	Al(OH)_3	FLAME TETARDANT	40%	21645-51-2
MP	$\text{P}_m\text{N}_n\text{H}_x\text{O}_y$	FLAME TETARDANT	5%	7723-14-0
Anti-oxide	$\text{C}_{73}\text{H}_{108}\text{O}_{12}$	ANTIOXIDANT	1%	6683-19-8
pigment	Toner + EVA + filling agent	COLORANT	4%	-----



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2014-4-16